BEFORE THE

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE

Establishing Oil Value for Royalty Due on Federal Leases, and on Sale of Federal Royalty Oil

Comments of

JOSEPH P. KALT

Harvard University and The Economics Resource Group, Inc.

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I. INTRODUCTION AND BACKGROUND

I am the Ford Foundation Professor of International Political Economy at Harvard University's John F. Kennedy School of Government. I am also a Senior Economist with The Economics Resource Group, Inc., a private consulting firm located in Cambridge, Massachusetts. My business address is One Mifflin Place, Cambridge, MA 02138. A copy of my curriculum vitae is attached as Exhibit A to these comments.

I am submitting these comments in response to the Notice of Proposed Rulemaking ("NOPR") regarding *Establishing Oil Value for Royalty Due on Federal Leases, and on Sale of Federal Royalty Oil* issued by the Minerals Management Service ("MMS") of the Department of the Interior ("DOI") on January 24, 1997 and published at 62. Fed. Reg. 3742. These comments are made on behalf of Amerada Hess Corp.; Amoco Production Co.; Chevron U.S.A., Inc.; Conoco, Inc.; Exxon Corporation; Marathon Oil Co.; Mobil Oil Corp.; Mobil Producing Texas & New Mexico, Inc.;

Phillips Petroleum Co.; Shell Western E&P Inc.; Texaco Exploration & Production, Inc.; Texaco Trading & Transportation, Inc.; and Union Pacific Resources Co. These parties have retained me in connection with pending litigation in a number of matters involving crude oil pricing and royalty payments.

In the course of my work on the foregoing matters, I have acquired extensive data and evidence regarding the posting of crude oil prices, crude oil transactions at leases and at downstream trading centers, and royalty payments by crude oil working interest owners in the U.S. In addition to this information and background, I have extensive experience in issues regarding market structure and the valuation of natural resources, including crude oil and natural gas. I have conducted research and published widely on matters of competition, pricing, regulation, market structure, and related economic issues in the natural resource sector, particularly oil and gas. I am the author of *The Economics and Politics of Oil Price Regulation: Federal Policy in the Post-Embargo Era*, *Drawing the Line on Natural Gas Regulation* (ed. with F.C. Schuller), and numerous other professional publications. I have also provided expert testimony related to the economics of competition and valuation in oil, gas, and other natural resource industries in matters before numerous courts, state and federal agencies, and the United States Congress.

II. ANALYSIS AND FINDINGS

In connection with my retention for expert analysis on behalf of the aforementioned parties, I have conducted an intensive examination of the domestic market that exists for crude oil at the lease level. As a result, I have acquired a large database and related information on arm's-length transactions occurring at the lease level in U.S. crude oil fields. These data bear directly upon the proposed rule at issue in this proceeding.

My examination of arm's-length transactions at the lease has revealed at least three particularly relevant findings.

1. There is an active market at the lease (or "wellhead") level. This market is highly competitive and involves major and minor integrated and non-integrated producers on the supply side, and numerous large and small integrated refiners and a very large number of independent marketers and brokers on the buying side.
2. The sustained existence and growth of more than one hundred non-integrated independent marketers who buy crude oil in transactions at the lease indicate a highly competitive system in which differences between wellhead values and values realized downstream from the lease represent real value that is added downstream from the wellhead. If these independent marketers, some of whom rank among the very largest of the first purchasers of crude oil, did not add value downstream of the wellhead, they would not survive the competition among the many purchasers of crude oil at the lease.
3. The actual transactions at the lease reveal market values that commonly vary significantly with supply and demand factors that are specific to individual locations, leases, and transactions.

The data that I have collected and reviewed covers the period since the early 1990s, and includes several hundred thousand outright purchase and sale transactions recorded in the course of business by large and small oil companies and independent marketer companies transacting at leases in Texas, Oklahoma, and New Mexico.[1] These data reveal that arm's-length, comparable transactions in a given oil field at any given point in time consistently occur within a range of prices, rather than at a single, common price. This range demonstrates the influence of highly localized supply and demand factors which cause value differences of significant magnitudes even among comparable arm's-length transactions occurring in the same field at the same time.

A number of important understandings emerge from the examination of the range of prices within which crude oil is actually transacted. First, the range of outright arm's-length transaction prices defines the observable range of market values of crude oil at the lease. Market values at a lease lie within a range because individual transactions at the lease are tailored to fit supply and demand factors specific to particular leases, crude oils, and transacting parties. The range of transactions prices revealed at the lease level is not the product of uncompetitive behavior or poorly informed or poorly skilled market participants. Rather, a highly competitive group of numerous market specialists, epitomized by brokers and marketers numbering in the hundreds, ensures a competitive and well-functioning marketplace. The existence of a range of prices in transactions at the lease is in no sense inconsistent with a well-functioning market; it is the expected outcome of a demonstrable process of competitive tailoring of transactions.

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[1] Outright purchases and sales exclude transactions, such as buy-sell or exchange transactions, in which crude oil at other locations is commonly included as consideration.

Second, I find that the range of posted prices commonly observed at particular oil fields quite consistently lies within the range of the proceeds realized by sellers in outright arm's-length transactions occurring at the leases in those same fields. Stated differently, the range of market values revealed by outright arm's-length transactions generally spans the range of posted prices. To determine whether any particular transaction, arm's-length or otherwise, reflects market value requires information about conditions specific to that lease, the crude oil involved, particularized transportation costs, and the particular transaction. That is, whether or not the price employed in a specific transaction reflects market value at the lease can only be determined by taking into account the attributes of that specific transaction.

By analogy, the proper economics for appraising the market value of a crude oil transaction at the lease is illustrated better by the familiar economics of appraising the market value of homes in a neighborhood than by the economics of homogeneous commodity transactions on an organized exchange. The MMS' proposed rule inappropriately adopts the latter framework as its explicit method for appraising crude oil value at the lease. In fact, the MMS' proposal to work back from crude oil prices on the New York Mercantile Exchange ("NYMEX") and from quoted market centers is unsupported by both basic economic principles and the evidence from actual arm's-length transactions. Because transactions at the lease level are not homogeneous, the use of NYMEX or market center prices in the manner proposed by MMS could result in significant under or over payments of royalties on federal crude oil.

The basis upon which the MMS relies, in part, for rejecting lease level transaction prices and for proposing, instead, a NYMEX/trade center methodology for valuing crude oil at the lease entails, the observation that NYMEX/trade center values netted back to specific locations for transportation costs and/or location differentials commonly exceed the level of posted and outright transaction prices. Inferences and intimations that such "gaps" in value reflect lease level prices that are below fair market value as a result of purported self-dealing by integrated crude oil purchasers or uncompetitive behavior at unspecified locations downstream from the wellhead are unfounded and inconsistent with sound economic reasoning. Assertions that ownership of refining and pipeline capacity or the use of exchanges by integrated oil companies result in monopsonistic restrictions of the demand for crude oil and attendant price suppression would (if borne out[2]) imply lower trade center prices and/or netbacks, but would not imply a "gap" between values netted back from trade centers and values observed in arm's-length lease transactions.

My research indicates that arm's-length transactions at the lease level provide accurate measure of the fair market value of crude oil at the lease. Moreover, as noted, the evidence is clear that posted prices of crude oil, which are publicly known in the oil industry, are consistently within the range of the market values revealed in arm's-length transactions at the lease. The "gaps" that can be observed between such values and prices netted back from selected trade centers are not components of the *wellhead* market value of crude oil. The "gaps," in fact, are the market's measure of the value of broker and

[2] Such assertions are, in fact, not supported by the evidence. Conclusions that the *facts* of vertical integration and/or exchanges result in uncompetitive marketplace results or otherwise depressed wellhead values for crude oil represent incompetent economic analysis.

marketer services and functions performed downstream of the wellhead. Indeed, it is these "gaps" that are the source of revenue of independent marketers who purchase at the lease and resell at trade centers (or other downstream locations). The services such parties perform, and that are similarly performed within vertically integrated purchasers, include: downstream gathering and aggregation; transportation arrangement and risks; price and volume risk-taking; storage at receipt or delivery points; development and application of marketing techniques; development and application of information and expertise regarding types of crude oil, sellers' preferences, customers' needs, and market volatility; and handling of transaction costs.

A netback methodology that deducts transportation or location differentials from prices observed in transactions occurring at trade centers, including the NYMEX, is inherently remote from the lease level of the value-added chain. Such a netback methodology fails to account both for the demonstrable dependence of market value at the lease on supply and demand factors particularized to leases and transactions, and for the value added to crude oil by downstream marketing functions. As a result of these factors, the netback methodology proposed by MMS would fail to measure accurately market value at the lease, and would also tend to produce prices that are generally higher than market value at the lease by amounts reflecting value added downstream through marketing functions.

In fact, implementation of the MMS netback methodology would result in a federal levy on such downstream services and functions under the name of collection of federal royalties on the value of federal crude oil at the lease. This is contrary to the economics applicable to valuation of vertically integrated functions (which makes reference to transactions by not-integrated parties in determining the proper dividing line between the value components of a vertically integrated production chain). The proposed rule would also discourage the efficient provision of downstream marketing services and functions, particularly by firms with any degree of vertical integration between crude oil production and downstream crude oil use. This is wholly contrary to the public's interest in a healthy and competitive oil industry and economy.

III. CONCLUSION

In summary, the sustained existence of a multitude of independent firms that perform downstream marketing services and functions evidences the facts that: a) "gaps" between netted back trade center values and lease values are compensation for value added downstream of the wellhead, and b) it is not plausible to conclude that such "gaps" are the product of other than a competitive market for crude oil at the lease. Seen in this light, it is clear that the MMS' proposed rule for valuing crude oil at the lease via its proffered netback methodology arises in the context of classic misunderstanding and populist mistrust of "middleman" functions of the type performed downstream of the wellhead by brokers, marketers, and integrated companies. While this is a recurring theme in U.S. politics, its pursuit in the face of the evidence and economics that I have reviewed here is poor public policy.

Respectfully submitted,

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